REMARKS

Applicant has cancelled claims 1-14 and 16-35 and added new claims 36-40. Accordingly, only claims 15 and 36-40 remain in the application. Of the remaining claims, claim 15 has been allowed while new claims 36-37 respectively represent now-cancelled claims 5 and 32 which were stated to be allowable. None of the other claims 38-40 have been allowed.

New claim 38 describes a method for identifying unknown particles that are present in a fluid (19 in our Fig. 1). The preamble of claim 38 describes directing a light beam (104) through the fluid while the fluid flows in a stream past the beam, and detecting scattered light by a plurality of detectors (112). The eventvector (outputs of detectors) for an unknown particle is compared to known data in an attempt to determine whether the unknown particle is of a first known species.

Following the preamble, claim 1 describes the step of detecting light as detecting only light that is scattered from the detect zone (114 in Fig. 2A). To do this, the detectors detect only light that is received within an angle that is no more than about 2.5°. Applicant's Fig. 2B shows one of the detectors (112), which is constructed to detect only light within a narrow angle E, so it detects only light from the detect zone.

Previous claims were rejected on Klein (6,315,955). Klein shows, in his Fig. 1a, a detector 4 that detects light within a wide angle that is 30° below line 5 and probably 30° above line 5 for detection within an angle of at least 60°. Accordingly, Klein does not detect only light scattered by a particle lying in a narrow detect zone.

Applicant submitted a claim similar to new claim 38 in a European patent application. The European Examiner cited US patent 4,693, 602 by Wyatt. Fig. 6 of Wyatt shows lines intersecting a single point at the center of a sphere, and shows the lines passing through "small apertures" 7. Wyatt says that (col.5, lines 29-30) the "small apertures 7 [are] used to hold small photodetectors or optical fibers". Wyatt's detectors detect only scattered light that reaches one of his apertures 7 (his Fig. 6). However,

such light reaching an aperture 7 can originate anywhere along the beam from his laser 17. Wyatt does not state that his photodetectors would detect light only within a narrow angle or that they are aimed at a small detect zone.

Applicant's step of detecting only light received within no more than about 2.5°, and from the detect zone, reduces the possibility that a detector will detect light simultaneously from two or more particles. Such double detection produces data that is useless.

New claim 39, which depends from claim 38, describes the step of grouping the eventvectors from first and second different known species in the hyperspace of an algorithm, to produce maximum separation of the groups and minimum separation of eventvectors of the same group. Klein describes stored calibration values, but does not described using an algorithm that produces maximum separation of groups and minimum separation of particles within each group.

New claim 40 has a preamble that describes apparatus of the type for detecting a particle which includes a laser that directs a beam through fluid, and a plurality of detectors that detect light scattered from a particle entering a detect zone. The claim describes the detectors each being constructed to detect light only within a narrow angle of no more than about 2.5°. As discussed in connection with method claim 38, Klein does not suggest this.

In view of the above, favorable reconsideration of the application is courteously requested. If the Examiner should wish to discuss the application, he is invited to call Leon D. Rosen at (310) 477-0578.

Respectfully submitted,

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